

Appln No. 10/820,013

Response to Office Action mailed August 26, 2005

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway, the doorway defined within a side-wall of the aircraft, the side-wall including an inner wall defining an interior surface of the side-wall and an outer wall defining an exterior surface of the side-wall, the inner wall and the outer wall disposed in a spaced-apart arrangement one relative to the other, so as to define at least a space therebetween, the system comprising:

 a transmitter disposed within the at least a space of the side-wall for providing an electromagnetic signal for use during an operation for aligning the one end of the passenger loading bridge to the doorway of the aircraft;

 a receiver disposed about a point having a known location relative to the one end of the passenger loading bridge, for receiving the electromagnetic signal transmitted from the transmitter, and for providing an electrical output signal relating to the electromagnetic signal;

 a bridge controller in electrical communication with the receiver, for receiving the electrical output signal provided from the receiver, for determining a next movement of the one end of the passenger loading bridge in a direction toward the doorway of the aircraft based upon the electrical output signal, and for providing a control signal relating to the determined next movement; and,

 a drive mechanism in communication with the bridge controller, for receiving the control signal therefrom, and for driving the one end of the passenger loading bridge in the determined direction toward the doorway of the aircraft.

Claim 2 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 1, wherein the at least a space is disposed within a portion of the side-wall that is adjacent to the doorway of the aircraft.

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Claim 3 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 1, wherein the at least a space is accessible via an opening defined through the interior surface of the side-wall.

Claim 4 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 1, wherein the at least a space is accessible via an opening defined through the exterior surface of the side-wall.

Claim 5 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 1, wherein the transmitter comprises an optical transmitter.

Claim 6 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 5, wherein the optical transmitter comprises a light source for providing the electromagnetic signal including light within a predetermined region of the electromagnetic spectrum.

Claim 7 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 6, wherein the predetermined region of the electromagnetic spectrum is selected from the group consisting of: the infrared region; the visible region; and, the ultraviolet region.

Claim 8 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 6, wherein the receiver comprises an optical receiver including a detector element for detecting the electromagnetic signal including light within the predetermined region of the electromagnetic spectrum.

Claim 9 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 6, wherein the opening defined through the exterior surface of the side-wall comprises a window that is transmissive to the light within the predetermined region of the electromagnetic spectrum.

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Claim 10 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 1, wherein the transmitter comprises a radio-frequency transmitter.

Claim 11 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 10, wherein the receiver comprises a radio-frequency receiver.

Claim 12 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 11, wherein the radio-frequency receiver includes a directional antenna for use in determining a direction from the location of the radio-frequency receiver to a location of the radio-frequency transmitter.

Claim 13 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 12, wherein the directional antenna includes two antennas for use in triangulation to determine the location of the radio-frequency transmitter.

Claim 14 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 1, comprising a processor in electrical communication with the transmitter, for receiving ancillary information relating to the aircraft and for providing to the transmitter an electrical signal encoded with data corresponding to the ancillary information and relating to the electromagnetic signal.

Claim 15 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 14, comprising a data entry device in operative communication with the processor for supporting entry of the ancillary information by a user aboard the aircraft.

Claim 16 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 14, comprising a sensor in operative communication with the processor, for sensing information relating to an interior of a cabin of the aircraft and for providing to the processor a signal relating to the sensed information.

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Claim 17 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 16, wherein the sensor comprises a temperature sensor.

Claim 18 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 14, comprising a temperature sensor in communication with the processor, for sensing information relating to an internal temperature of the aircraft and for providing to the processor a signal relating to the sensed information.

Claim 19 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 1, comprising a temperature sensor in communication with the transmitter, for sensing information relating to an internal temperature of the aircraft and for providing to the transmitter a signal relating to the sensed information.

Claim 20 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 10, comprising a memory circuit in electrical communication with the processor for retrievably storing the ancillary information for access by the processor.

Claim 21 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 1, wherein the receiver is mounted to a portion of the passenger loading bridge.

Claim 22 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 1, wherein the receiver is mounted to a portion of the passenger loading bridge proximate the one end thereof.

Claim 23 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 1, comprising a user interface disposed within a cockpit portion of the aircraft for receiving an indication from a user for initiating the operation for aligning the one end of the passenger loading bridge to the doorway of the aircraft, and for providing an electrical control signal in dependence upon receiving the indication.

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Claim 24 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 23, comprising a second transmitter disposed aboard the aircraft and in communication with the user interface, the second transmitter being responsive to the electrical control signal for transmitting a second electromagnetic signal comprising an activation signal for initiating the operation for aligning the one end of the passenger loading bridge to the doorway of the aircraft.

Claim 25 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 24, wherein the user interface comprises a touch sensitive monitor for supporting both entry of information relating to the aircraft and display of information relating to the aircraft.

Claim 26 (original) A system for aligning one end of a passenger loading bridge to an aircraft having a doorway according to claim 24, wherein the user interface comprises a manually operable switch mechanism.

Claims 27-40 (cancelled)